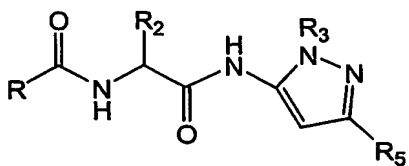


What is claimed is:

1. A compound of Formula I:

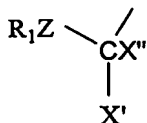


5 Formula I

or a pharmaceutically acceptable salt thereof,

- wherein R is substituted or unsubstituted aryl, cycloalkyl, heterocyclic, alkoxy,
 10 cycloalkoxy, aryloxy, heteroaryloxy, alkylamino, cycloalkylamino, arylamino,
 heteroaryl amino; or

R is



- 15 wherein X' and X'' are each independently hydrogen, hydroxy or fluoro,
 provided when one of X' and X'' is fluoro, the other is not hydroxy; or

X' and X'' together form an oxo group,

Z is selected from the group consisting of alkyl, nitrogen, oxygen, sulfur
 and a bond covalently linking R₁ to -CX'X''-

- 20 R₁ is selected from the group consisting of hydrogen, substituted or
 unsubstituted alkyl, alkenyl, aryl, cycloalkyl, cycloalkenyl, heteroaryl, and
 heterocyclic;

- R₂ is selected from the group consisting of hydrogen, C₁-C₄ alkyl,
 alkylalkoxy, alkylthioalkoxy, -COOR_{2a}, and -COR_{2a} wherein R_{2a} is hydrogen, C₁₋₄
 25 alkyl, cycloalkyl, or heterocycle;

R_3 is H, substituted or unsubstituted, linear-, branched- or cyclo-alkyl or substituted or unsubstituted phenyl;

R_5 is $-Y-R_6$, wherein Y is substituted or unsubstituted alkyl, alkenyl, aryl, cycloalkyl, cycloalkenyl, heteroaryl, heterocyclic, or a bond; and

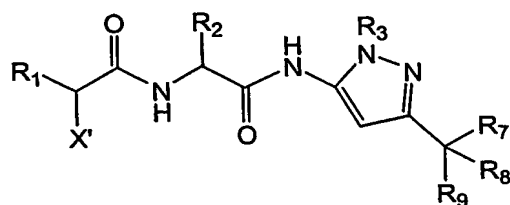
5 R_6 is substituted or unsubstituted aryl, heteroaryl, cycloalkyl, heterocycloalkyl, aryloxy, heteroaryl N-oxide, or arylsulfide;

provided when Y is a bond, then either R_6 is cycloalkyl, or R_2 is alkylalkoxy or alkylthioalkoxy.

10 2. The compound of Claim 1, wherein $R = -CR_1X'X''$, X' is H or OH, X'' is H, and R_1 is aryl or substituted aryl.

3. The compound of Claim 1, wherein R_3 is H or t-butyl.

15 4. A compound of Formula II:



Formula II

wherein R_1 is aryl, or substituted aryl; X' is H or OH; R_2 is CH_3 , R_3 is H, or t-butyl; R_7 is aryl, substituted aryl, or U-Aryl, wherein U is O or CH_2 ; and R_8 and R_9 are
20 independently H, or alkyl:

5. A pharmaceutical formulation comprising the compound according to any one of Claims 1-4 and a pharmaceutically acceptable carrier.

25 6. A method for inhibiting β -amyloid peptide release or synthesis in a cell comprising administering to said cell a compound according to Claim 1, in an amount effective in inhibiting the cellular release and/or synthesis of β -amyloid peptide.

7. A method for inhibiting γ -secretase activity comprising administering to a host an effective amount of the compound according to Claim 1.

8. A method for treating or preventing a neurological disorder associated with β -amyloid peptide production comprising administering to a host a pharmaceutical formulation comprising a therapeutically effective amount of the compound according to Claim 1.

9. The method according to Claim 8, wherein said neurological disorder is Alzheimer's disease.

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